INACCESSIBILITY OF BUSINESS

CITIES, districts within cities and individual properties within districts are affected more by the influence of "accessibility" than by almost any other influence which creates utility. While physical characteristics and climatic conditions are sometimes controlling factors, the accessibility to markets must be considered the fundamental influence which creates the usefulness of the land and, therefore, its value. All of the larger urban centers of the world are located on sea, lake or river because waterways provided the sole means of accessibility before the advent of train, bus and plane. It is said that Indianapolis, Indiana, is the largest city in the world not located on a navigable waterway; its development came after transportation by water had lost its importance.

The great development in rapid transportation during the past thirty years has been a tremendous force in causing changes and shifts of population within all metropolitan cities. Peripheral growth and decentralization of population from the older inner city is perhaps the No. 1 problem facing all city governments today. High-priced land for residential use is a thing of the past with the vast areas of cheap undeveloped land in the environs now made accessible by rapid transportation. Many industries find it more profitable to build modern plants in the outlying sections instead of in the high-priced congested sections of the inner city.

As population spreads out in ever-widening bands to outlying areas, one of the serious problems confronting all cities involves the continued accessibility and stability of their central or downtown business districts.

There are two obvious ways whereby a city can continue to provide accessibility to its downtown districts; one is by increasing the space for off-street parking, and the other is to keep expanding and speeding up mass transportation facilities.

Insofar as providing additional off-street parking is concerned, many ingenious plans have been advanced, but thus far most of them have proved to be relatively ineffective in cutting traffic congestion in the downtown area. As more parking space is provided, more people drive downtown and apparently this trend will continue so long as the number of automobiles continues to increase.

Speeded-up and expanded mass transportation, therefore, seems to offer a better way for cities to maintain accessibility to their downtown business and retail centers. The splendid rapid transportation system built up in the New York City area is the main reason Manhattan has been able to maintain its leading position as the shopping and business center of the area.

HOW TO ESTIMATE THE NUMBER OF PARKING SPACES
IN EACH 100 FEET OF ROW

IF CARS ARE ARRANGED IN A HERRINGBONE 30° ANGLE PARKING PATTERN:
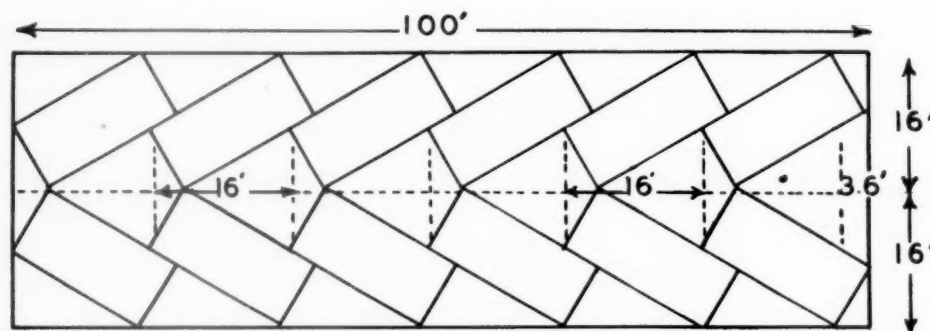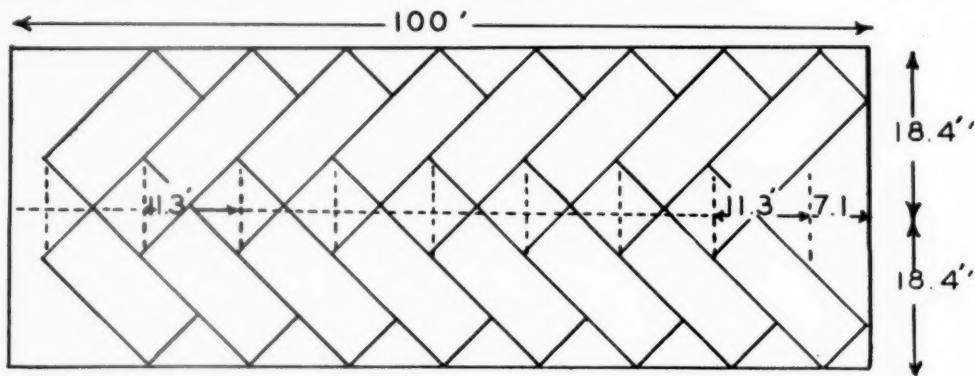

No. of cars = length of row (100′) minus overlap length (3.6′) ÷ length
necessary to park car at this angle (16′) x no. of rows (2)
= 12 cars

$$\frac{100' - 3.6'}{16'} \times 2 = \frac{96.4'}{16'} \times 2 = 6 \times 2 = 12$$

Necessary width = 32′ (+ aisle width, see page 361)

IF CARS ARE ARRANGED IN A HERRINGBONE 45° ANGLE PARKING PATTERN:
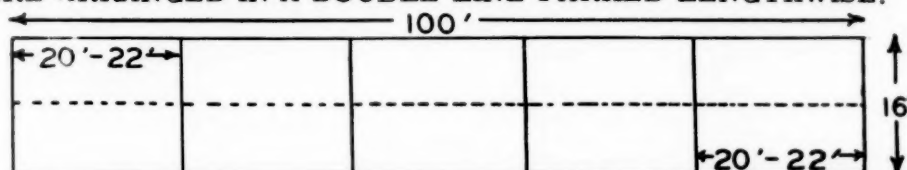

No. of cars = length of row (100′) minus overlap length (7.1′) ÷ length
necessary to park cars at this angle (11.3) x no. of rows (2)
= 16.4 cars

$$\frac{100' - 7.1'}{11.3'} \times 2 = \frac{92.9'}{11.3'} \times 2 = 8.2 \times 2 = 16.4 \text{ cars}$$

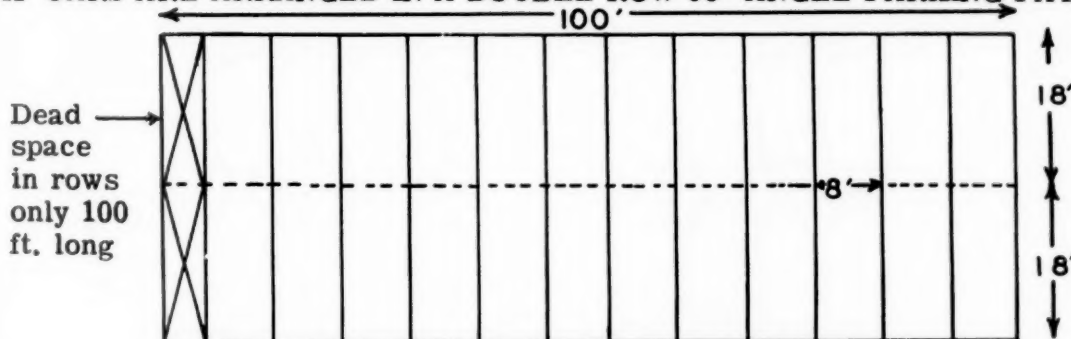Necessary width = 37′ (+ aisle width, see page 361)

HOW TO ESTIMATE THE NUMBER OF PARKING SPACES
IN EACH 100 FEET OF ROW

IF CARS ARE ARRANGED IN A DOUBLE LINE PARKED LENGTHWISE:

No. of cars = length of row ÷ length of car x no. of rows (2) = approx. 10 cars
Necessary width = 16' (+ aisle width, see page 361)

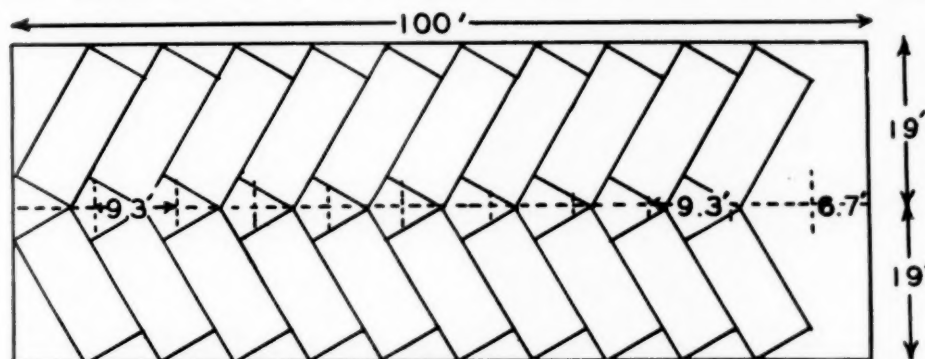IF CARS ARE ARRANGED IN A DOUBLE ROW 90º ANGLE PARKING PATTERN:

No. of cars = length of row (100') ÷ width of car (8') x no. of rows (2)

$$\frac{100'}{8'} \times 2 = 12 \times 2 = 24 \text{ cars}$$

Necessary width = 36' (+ aisle width, see page 361)

IF CARS ARE ARRANGED IN A HERRINGBONE 60º ANGLE PARKING PATTERN:

No. of cars = length of row (100') minus overlap length (6.7') ÷ length
necessary to park cars at this angle (9.3') x no. of rows (2)
= 20+ cars

$$\frac{100' - 6.7'}{9.3'} \times 2 = \frac{93.3'}{9.3'} \times 2 = 10.02 \times 2 = 20.04 \text{ cars}$$

Necessary width = 39' (+ aisle width, see page 361)

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The accessibility of the downtown district of those cities with surface travel depends upon rapid transportation of both mass transportation and privately owned automobiles to that area. This involves elimination of all barriers which delay or hinder the flow of traffic on all arterial trafficways leading to the downtown district, such as grade crossings, bridge tolls, narrow streets, parked cars, parking facilities, etc. Within the central business district the flow of traffic must be directed and speeded up. Parking cars on narrow streets, causing congestion, is a direct cause of inaccessibility. One-way traffic streets often reduce congestion and increase accessibility.

Since most downtown districts antedated the automobile, their layout did not take into account the convenience of shoppers who drive to these districts to shop. As a result, parking space at a reasonable cost is not available at a convenient distance from the shopping district in most metropolitan cities. Four blocks is too far for the woman shopper to walk with convenience. From our inquiries it is found that one block is almost the limit of convenience. Owners and merchants are often shortsighted in insisting on curb parking and in failing to contribute toward close-by off-street parking facilities. The inconvenience of shopping conditions is one of the main causes of inaccessibility and the resulting decentralization of the downtown districts and the creation of outlying buying centers.

The automobile is a vital factor in retail distribution. Many retail establishments have already recognized the importance of the trend toward the drive-in shopper and have located in sections of the city where parking is possible. Sears-Roebuck has been so successful in comparatively off-locations because these locations are more accessible to the automobile shopper than locations in the downtown district. In most cities, this progressive company has sought locations on arterial trafficways and mass transportation which have good accessibility to a large population and where a large area available for parking cars is obtainable at a reasonable cost. Pedestrian traffic at the location - the orthodox measure of the desirability of retail locations - is practically non-existent. This company makes its merchandise accessible to both the shopper by mass transportation and the drive-in shopper, who often comes a great distance to shop. To further increase the accessibility to shoppers, it has long been the policy to remain open on certain nights of the week. The successful operations of this company are common knowledge; it has recognized modern trends and made its retail outlets accessible to the shopping public. In a number of cities this company ranked near the top in volume of retail sales at so-called off-locations without pedestrian traffic, many blocks from the heart of the downtown shopping district.

In outlying areas the problem of accessibility, while less acute, is nonetheless of prime importance. Perhaps the most common error made by retailers is in failing to provide sufficient off-street parking space. Great care is usually exercised in selecting a "hot spot" or a location that will readily become one. Frequently these locations are accessible to large mass transportation arteries and transfer points, but to be completely accessible they must have adequate parking facilities (usually off-street) within one block.

It is often not enough simply to provide sufficient space within one block of the shopping center. The parking area should have several entrances and exits and,

in large or congested lots, the flow of cars should be directed. One large Texas company has even installed a control tower to handle the traffic on its parking lot (as has David Bohannon in California). If it is necessary to place the parking area behind a long row of stores, walkways between the store buildings or attractive rear entrances should be provided.

Opinion is fairly unanimous that no charge should be made for parking. There is some disagreement, however, as to the amount of space necessary and where it should be.

In one of its technical bulletins written in 1945, the Urban Land Institute advocates at least 1-1/2 to 2 square feet of parking area for every square foot of floor space. In the same bulletin it mentions that David D. Bohannon, California developer, thinks that a three-to-one ratio is advisable.

The Institute points out in a more recent publication that the size and nature of the shopping center will influence the parking-to-floor-space ratio considerably, as will the rate of sales during shopping hours. We believe that this is a reasonable view to take. Certainly a center located in an apartment district where a large percentage of the trade would be pedestrian would need less parking space than a shopping district where most of the business came from drive-in shoppers. Waverly Taylor of Washington, D. C., has found that a two-to-one parking ratio is about as low as is desirable, even where 60 per cent of the business comes from walk-in trade.

Location of parking space in the rear of the stores meets with resistance at several points. Many motorists are reluctant to drive to the rear unless they know a space will be available. Other motorists hesitate to park in the rear of the stores for fear of robbery. Access to rear parking space is frequently congested and circuitous, causing no small amount of irritation to the motorist. One hundred per cent front parking has the disadvantage of shoving the store buildings back a great distance from the street and possibly obscuring the displays of merchandise in the windows. Some centers have used 100 per cent front parking with considerable success. Hampton Village in southwest St. Louis is one example.

With the exception of some of the larger chain operators, most merchants do not like side parking between the stores, feeling that it is better to group the stores closely rather than stretching out the center, thereby causing more walking for the shopper.

Apparently there is no ideal solution to fit the needs of all shopping centers, but possibly the best solution is to have most of the parking area in the front of the stores with easily accessible, well-lighted and supervised space in the rear to help accommodate peak parking loads.

Still another method is to have an entire block devoted to parking. In its Community Builders Handbook, the Urban Land Institute quotes J. C. Nichols of Kansas City on such an arrangement:

> We have two such stations in the Plaza - they serve
> merchants in all directions impartially. Each station has
> (cont. on page 362)

WIDELY USED PARKING PATTERNS

CUSTOMER PARKING - 60° ANGLE

56' x 105' = 5,880 sq. ft.   20 cars = 294 sq. ft. per car
Add 18' to the width and 30 cars can be parked providing an
alley gives access. (74' x 105' = 7,770 sq. ft.,
÷ 30 cars = 258 sq. ft. per car)

ALLEY

18'   18'

18'

56'

105'

20'

9.2' 9.2' 10.4'

18'
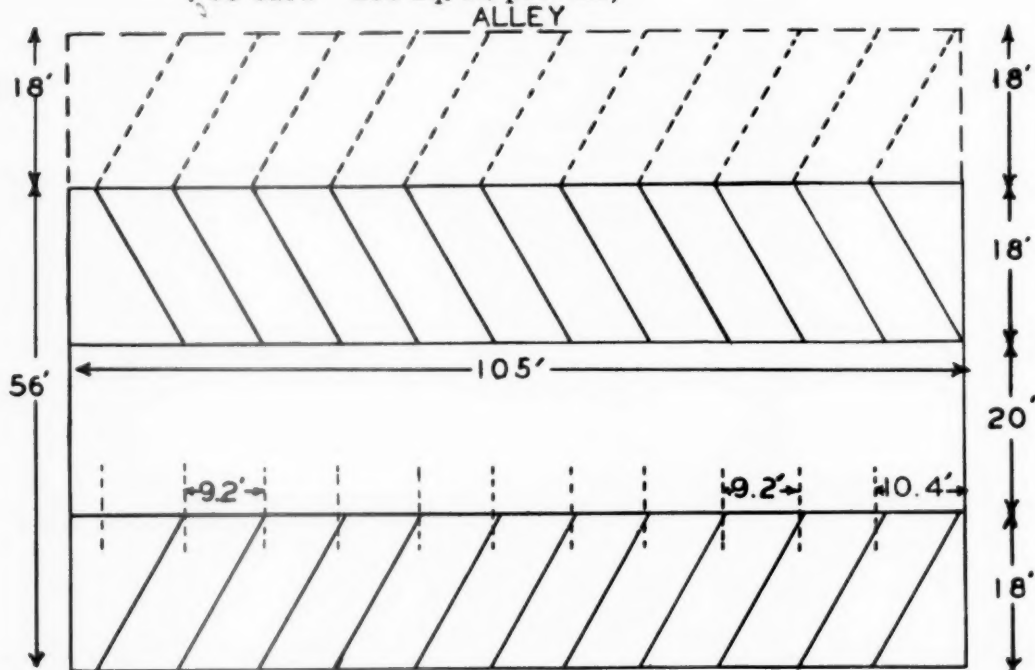
CUSTOMER PARKING - 45° ANGLE

110' x 50' = 5,500 sq. ft.   16 cars = 344 sq. ft. per car
Add 17' to the width and 24 cars can be parked providing an
alley gives access. (67' x 110' = 7,370 sq. ft.,
÷ 24 cars = 307 sq. ft. per car)

17'

50'

11.3'   17'

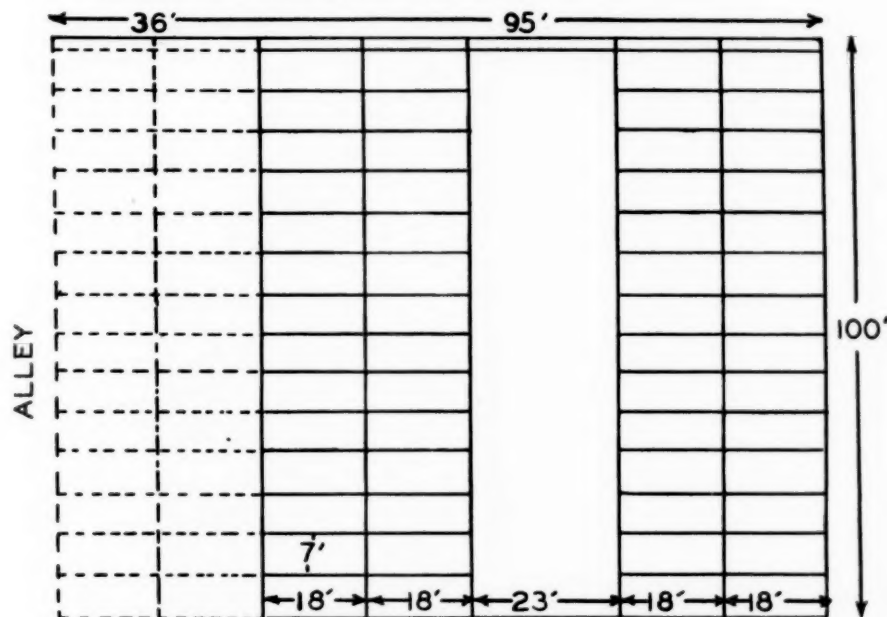16'

110'

17'

17'

17'
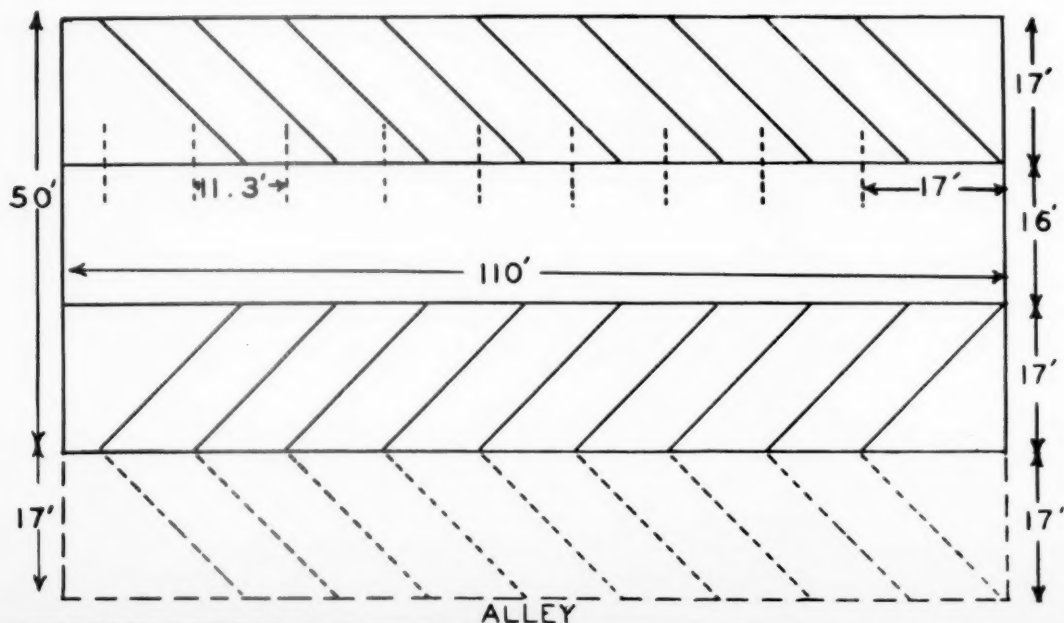
ALLEY

WIDELY USED PARKING PATTERNS

ATTENDANT PARKING

95′ x 100′ = 9500 sq. ft. 56 cars = 170 sq. ft. per car, including aisle
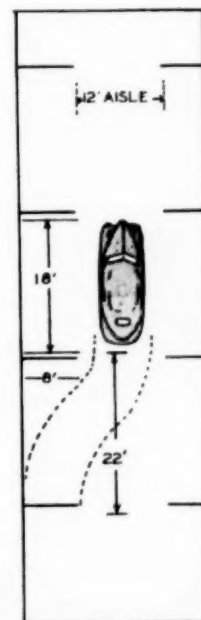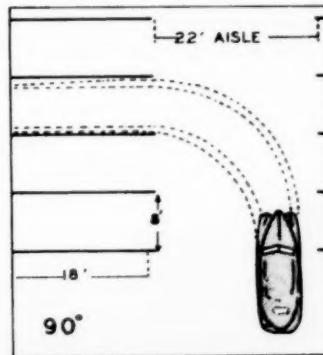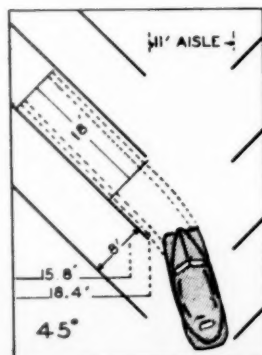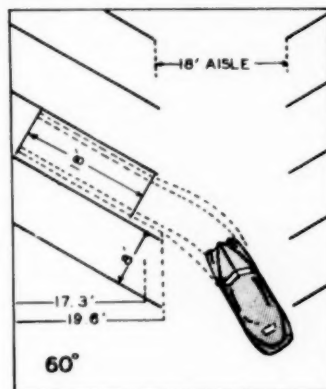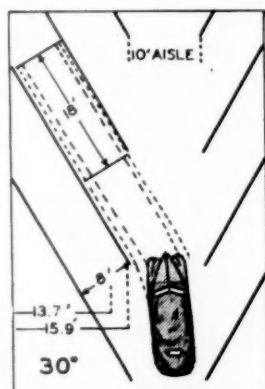An addition of an alley would allow an attendant to park 28 more
cars on an additional 36′. (100′ x 131′ = 13,100 sq. ft.,
+ 84 cars = 156 sq. ft. per car)

SPACE AND AISLE REQUIREMENTS FOR PARKING AT VARIOUS ANGLES

opposite entrances from two streets, which is a great help. They look like parks from the outside. The automobile entrance aisle runs through the center of the station and motorists can see any vacant stall.

All of our merchants prefer this type of station. We only wish it were not too late to create more of them. They develop a sort of town square idea and effectively tie our merchants together all around the parking stations. The merchants' signs are visible from all over the station from boundary street to boundary street. Pedestrian exits are provided on all sides.

Although the effects of inaccessibility are frequently very difficult, if not impossible, for an appraiser to measure, they should be given particular attention in appraisals of commercial properties. It is not often possible to know of proposed changes in the neighborhood or area that will render the property inaccessible (see April 16, 1948, Appraisal Bulletin), but whenever these proposed or recent changes - such as a more modern and more elaborate shopping center - are known, the probable effects of these changes on the appraised property should be given serious consideration.

Many studies have been made regarding parking areas and arrangements. The most widely used appear in diagram on the preceding pages. There is no accurate way to determine how many square feet of area each car takes in each of the various parking patterns. The dotted portions and notes on the diagrams on pages 360 and 361 illustrate this point.

One fairly easily used rule of thumb to roughly estimate parking requirements is the number of parking spaces required for each 100 square feet of floor space.

If we use an average of 250 square feet per parking space (including drives and aisles - not net parking space), the following relationship exists between the number of spaces required and the number of square feet of retail space.

Ratio of parking
area to retail space

1 to 1	-	One parking space for each 250 sq. ft. of retail space.
1-1/2 to 1	-	One parking space for each 166 sq. ft. of retail space.
2 to 1	-	One parking space for each 125 sq. ft. of retail space.
2-1/2 to 1	-	One parking space for each 100 sq. ft. of retail space.
3 to 1	-	One parking space for each 83 sq. ft. of retail space.
3-1/2 to 1	-	One parking space for each 71 sq. ft. of retail space.
4 to 1	-	One parking space for each 63 sq. ft. of retail space.